

CLAIMS

1. A method of manufacturing a tire in which preset-beads each preformed by mounting a bead filler on a bead core are disposed radially outward of a carcass band and both side portions of the carcass band are turned around the preset beads to build the tire, wherein said preset bead is formed by winding and laminating a ribbon-shaped filler rubber radially outward of the bead core over several laps.  
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2. The method of manufacturing a tire according to claim 1, wherein the ribbon-shaped bead filler rubber is so directed that its thickness direction is aligned to the direction of the central axis of the bead core and the ribbon-shaped bead filler rubber is wound and laminated on a side face of a disk rotating about the central axis of the bead core.  
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3. An apparatus of forming a preset bead for use in the tire manufacturing method according to claim 1 or 2, comprising:  
15        a bead core-holding device for holding the bead core;  
        a disk integrally rotating with the bead core-holding device to wind and laminate a ribbon-shaped bead filler rubber on a disk surface;  
        a extruder extruding said ribbon-shaped filler rubber in accordance with its winding; and  
20        a ribbon-attaching roller displaceably provided on the disk surface of the disk and pressing the extruded ribbon-shaped bead filler rubber against the disk.
4. The preset bead-forming apparatus according to claim 3, wherein the bead core-holding device is composed of magnets which attract and hold the side face of the bead core and a centering device which applies a force to an inner circumference face of the bead core attracted by the magnets to center the bead core, and said apparatus further comprises a ribbon-attaching roller position-controlling means controlling the position of said ribbon-attaching roller.  
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- 30        5. A system of forming a preset bead, comprising:  
        a preset bead-forming apparatus;  
        a bead core preparing station for preparing bead cores supplied to said preset bead-forming apparatus;

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a preset bead storage station for temporally storing the formed preset beads; and

5 a bead-handling robot for transferring the bead cores from the bead core-preparing station to the preset bead-forming apparatus as well as transferring the preset beads from the preset bead-forming apparatus to the preset bead storage station.

6. The preset bead-forming system according to claim 5, further comprising a system-controlling device for providing a direction of the size of the bead to be prepared to the bead core-preparing station and providing a 10 direction of the size of the preset bead to be formed to the preset bead-forming device on the basis of the predetermined formation order of the preset bead, the order including at least a combination of the preset beads in different sizes which are mutually successive in the order.

7. The preset bead-forming system according to claim 5 or 6, further 15 comprising a preset bead inspection station for determining whether the preset bead is good or bad by measuring the weight and shape of the preset bead formed by the preset bead-forming system.